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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/026,539	12/27/2001	Sang Jun Choi	K-0368	9460

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EXAMINER	
WONG, WARNER	

ART UNIT	PAPER NUMBER
2668	

DATE MAILED: 12/13/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/026,539	CHOI, SANG JUN	
	Examiner	Art Unit	
	Warner Wong	2668	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *27 December 2001*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-21* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-21* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *27 December 2001* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Specification

The disclosure is objected to because of the following informalities:

1. Page 8, line 1: the reference number for description "AAL2 processor 121" is incorrect. It should be changed to "AAL2 processor 212".

2. Page 8, line 2: the reference number for description "AAL2 processor 120" is incorrect. It should be changed to "AAL2 processor 122".

3. Page 8, line 3: the description "AAL processor" is incorrect when compared to the drawing fig. 2. It should be changed to "AAL2 processor".

4. Page 10, line 6: the description "AAL processor" is incorrect when compared to the drawing fig. 2. It should be changed to "AAL2 processor".

5. Page 10, line 10: the description "AAL processor" is incorrect when compared to the drawing fig. 2. It should be changed to "AAL2 processor".

6. Page 10, line 16: the description "AAL processor" is incorrect when compared to the drawing fig. 2. It should be changed to "AAL2 processor".

7. Page 10, line 19: the description "AAL processor" is incorrect when compared to the drawing fig. 2. It should be changed to "AAL2 processor".

Appropriate correction is required.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Petersen (6,804,246) and further in view of Song (6,944,138).

Regarding claims 1 and 11, Petersen describes a network for transmitting asynchronous transfer mode (ATM) adaptation layer-2 (AAL2) type ATM cells (AAL2 cells), comprising:

an AAL2 transmitter (fig. 7A, Tx/Rx #42-35) that generates AAL cells (i.e. fig. 7A, path of AAL2' ATM-VCC [Virtual Circuit Cells] from #42-35) by multiplexing N AAL packets , comprising (generated by adding) an AAL packet header to every (ith) data subset of an original user data set (fig. 4 AAL2' cells each having a ATM_H header AAL2_H header and AAL2 payload [user data subset]);

an AAL receiver (fig. 7A, CHU #42-32) that restores the original user data set by demultiplexing the N AAL packets (col. 11, lines 23-26, where CHU terminates AAL2 link and fig. 11, ATM demultiplexing #260 & AAL2' mapping 262).

an AAL2 transmitter (fig. 7A, CHU #42-32) that generates AAL2 cells (col. 3, lines 21-25 and fig. 11, where AAL2 is sent to FIFO #252) by multiplexing M common part sublayer (CPS) packets (fig. 3), which comprises (generated by adding) a CPS

packet header to a jth data subset of the restored original user data set (payload) (fig. 3, AAL2 CPS packet comprising CPS-packet header and payload).

Regarding claims 2 and 12, Petersen describes all limitations set forth in claims 1 and 11 respectively. Petersen further describes: the AAL packet header includes a sequence number of the ith data subset (fig. 3A, where SN = sequence number of the AAL2 data).

Regarding claims 3 and 13, Petersen describes all limitations set forth in claims 2 and 12 respectively. Petersen further describes: the AAL packet header further includes a routing tag field that identifies the original user data set and a length indicator field (LI) that indicates the length of the ith data subset (fig. 2, Channel ID CID and LI are the routing tag field and the Length Indicator respectively of the AAL2 data).

Regarding claims 5 and 15, Petersen describes all limitations set forth in claims 1 and 11 respectively. Petersen further describes: each of AAL cell includes an ATM header and a Start of Packet field, which indicates a starting location of an ith AAL packet. (fig. 3A, a header where the start field resides, "The start field 24, shown in FIG. 3A, facilitates one AAL2 packet bridging two ATM cells.", col. 2, 27-28).

Regarding claims 6 and 16, Petersen describes a network for receiving asynchronous transfer mode (ATM) adaptation layer-2 (AAL2) type ATM cells (AAL2 cells), comprising:

an AAL2 receiver (fig. 7A, CHU #42-32) that receives AAL2 cells (col. 11, lines 24-26 and fig. 7A, where CHU terminates AAL2 ATM-VCC), containing common part sublayer (CPS) packets corresponding to an original

user data set (fig. 2, where cells contained AAL2-CPS packets), and restores the original user data set by demultiplexing the CPS packets (col. 3, lines 17-21, fig. 11 #260 & #268, fig. 13B, #13B-13 and fig. 13F, #13F-12);

an AAL transmitter (fig. 7A, CHU #42-32) that generates AAL cells (fig. 13F, #13F-16 generating AAL2' cells) by multiplexing N AAL packets (fig. 4, where ATM_H header is added/multiplexed with the AAL2 packet #26[4-1] and padding to become an AAL2' cell) , generated by adding an AAL packet header to an ith data subset of the restored original user data set, wherein i and N are positive integers and $1 < i < N$ (fig. 4, where AAL packet header is AAL2_H and ith data subset is AAL2 payload).

Regarding claims 7 and 17, Petersen describes all limitations set forth in claims 6 and 16 respectively. Petersen further describes:

an AAL receiver (fig. 7A, CHU #42-32) that restores the original user data set by demultiplexing the N AAL packets (col. 11, lines 23-26, where CHU terminates AAL2 link and fig. 11, ATM demultiplexing #260 & AAL2' mapping 262).

Regarding claims 8 and 18, Petersen describes all limitations set forth in claim 6 and 16. Petersen further describes: the AAL packet header includes a sequence number of the ith data subset (fig. 3A, where SN = sequence number of the AAL2 data), a routing tag field identifying the original user data set (fig. 2, Channel ID CID is the routing tag field in respect to the AAL2 data) and a length indicator field indicating the length of the ith data subset (fig. 2, LI is the Length Indicator in respect to the AAL2 data).

Regarding claims 10 and 20, Petersen describes all limitations set forth in claims 6 and 16 respectively. Petersen further describes: each of AAL cell includes an ATM header and a Start of Packet field, which indicates a starting location of an ith AAL packet. (fig. 3A, a header where the start field resides, "The start field 24, shown in FIG. 3A, facilitates one AAL2 packet bridging two ATM cells.", col. 2, 27-28).

Regarding claim 21, Petersen describes all limitations set forth in claim 1. It is inherent that Petersen further describes: i, j, N, and M are positive integers, $1 < i < N$, and $1 < j < M$, where i and j are variables to the N segmented AAL packets and M segmented AAL2 packets.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 4 and 14 rejected under 35 U.S.C. 103(a) as being unpatentable over Petersen in view of Strawczynski (6,628,641).

Regarding claims 4 and 14, Petersen describes all limitations set forth in claims 3 and 13 respectively. Petersen lacks what Strawczynski describes: the AAL packet (cell) header further includes a C-FLAG field (PTI) that may indicate whether the payload (ith data subset) represents the last cell of the frame (Nth data subset of the original user data set) (col. 7, lines 62-65).

It would have been obvious to one with ordinary skill in the art at the time of invention by applicant to specify that the PTI field may be used to indicate if the transmitted cell/packet is the last cell/packet for a frame of user data. The motivation being that should the receiver decides that the entire frame is irrecoverable during the transmission processes, the receiver may still detect and process the final cell containing important information (Strawczynski, col. 8, lines 2-10).

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Song (6,944,138), Song (6,621,821), Lee (2002/0085564), Dempo (6,587,465), Choi (2001/0030966), Lee (2002/0089988) Lee (2002/0089988) and Wakizaka (6,639,916).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Warner Wong whose telephone number is 571-272-8197. The examiner can normally be reached on 5:30AM - 2:00PM, M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chieh Fan can be reached on 571-272-3042. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Warner Wong
Examiner
Art Unit 2668

WW

CHIEH M. FAN
SUPERVISORY PATENT EXAMINER